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EXAMINER	
VAN DOREN, BETH	
ART UNIT	PAPER NUMBER
3623	

DATE MAILED: 06/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/626,191	BEYER ET AL.
	Examiner	Art Unit
	Beth Van Doren	3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 July 2000* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. The following is a non-final, first office action on the merits. Claims 1-15 are pending.

Claim Objections

2. Claims 7 and 14 are objected to due to a typographical error. Both claims contain the limitation "run rate", which should more appropriately be --run-rate--. Appropriate correction is required in both instances.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 3 and 11 recite the limitation "normalizes the demand profiles of the similar products for their lengths of life". The use of the term "their" renders this claim indefinite because it does not clearly and distinctly claim the elements of the claim. This limitation has been construed as --normalizes the demand profiles of the similar products for the lengths of life of said product-- for examination purposes. Clarification is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Technology Strategy, Inc. (www.grossprofit.com).

The following references describe the different features of the service performed by Technology Strategy, Inc.:

i. Screenshots of www.grossprofit.com, which is Technology Strategy, Inc.'s homepage (referred to herein as references A);

ii. Article "Looking Back to Fashion's Future" by Ackerman from The Boston Globe (referred to herein as reference B);

iv. Article "Merchants Try Complex Math Tools to Improve Inventory Decisions" by Koloszyc from Stores Magazine (referred to herein as reference C).

5. As per claim 1, Technology Strategy, Inc. teaches a product demand forecasting system, comprising:

a profile extractor that generates a demand profile of a new product yet to be introduced based on demand profiles of similar products already introduced, wherein the profile extractor uses statistics and simulation on the demand profiles of similar products to obtain the demand profile of the new product (See reference A, page 3, sections 1 and 2, and page 4, sections 2 and

3, reference B, page 2, sections 3 and 4, and page 3, section 1, and reference C, page 1, section 1, page 2, sections 1 and 5, and page 3, sections 2 and 3, wherein a profile extractor takes and stores historical demand data of similar products already introduced to market and stores this data as the baseline for the new product to be introduced to market);

a life-cycle demand predictor that generates a total life-cycle demand of the new product based on historical demand data of the similar products (See reference A, page 3, section 2, page 4, sections 1-3, and page 5, section 1, reference B, page 2, sections 1, 3, and 4, and page 3, section 1, and reference C, page 1, sections 1-3, page 2, sections 1, 3, and 4-8, and page 3, sections 1-3, wherein a life-cycle demand predictor portion generates total life-cycle demand for the new product based on historical demand of similar products);

a forecast creator coupled to the profile extractor and the demand predictor to generate a life-cycle demand forecast for the new product based on the demand profile and total life-cycle demand of the new product (See reference A, page 3, section 2, and page 4, sections 2-3, reference B, page 2, sections 3 and 4, and page 3, section 1, and reference C, page 1, sections 1-3, page 2, sections 1 and 3-8, and page 3, sections 1-5, wherein a forecast creator is coupled to the other portions to generate a life-cycle demand forecast for the new product based on the demand profile and the total life-cycle demand determined. The forecast creator is used to assess the life span of the product and pricing strategies associated with the product and is updated during this life span).

However, while Technology Strategy, Inc. uses simulation, such as Monte Carlo simulations, and statistics to determine the demand profile, Technology Strategy, Inc. does not expressly disclose normalizing and averaging the demand profiles.

Technology Strategy, Inc. teaches using simulation, such as the Monte Carlo simulation, as well as mathematical manipulation in determining a demand profile for a new product. It is old and well known that simulations, such as Monte Carlo simulations, normalize and average historical data to generate values for uncertain future situations. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to average and normalize the data of Technology Strategy, Inc. in order to more accurately predict future situations by using old and well-known simulation and statistical techniques that cause the more accurate prediction of values.

6. As per claim 2, Technology Strategy, Inc. discloses a product demand forecasting system, wherein the profile extractor further comprises:

a relevant product selection module that selects the similar products and extracts the historical demand data of the similar products from an external historical demand database (See reference A, page 3, sections 1 and 2, page 4, sections 2 and 3, and page 5, section 1, reference B, page 2, sections 3 and 4, and page 3, section 1, and reference C, page 1, section 1, page 2, sections 1 and 5, and page 3, sections 2 and 3, wherein historical demand data is obtained for the company's external database for relevant products similar to the new product);

a module that calculates the demand profile of each of the similar products to obtain the demand profile of the new product using simulation, statistics, and other mathematical manipulations (See reference A, page 3, section 2, page 4, sections 1-3, and page 5, section 1, reference B, page 2, sections 1, 3, and 4, and page 3, section 1, and reference C, page 1, sections 1-3, page 2, sections 1, 3, and 4-8, and page 3, sections 1-3, wherein data mining, genetic

optimization, mathematical modeling, and Monte Carlo simulations are used to determine demand profiles).

However, Technology Strategy, Inc. does not expressly disclose a demand normalization and average profile determination module that normalizes the demand profile and averages all the normalized demand profiles.

Technology Strategy, Inc. teaches using simulation, such as the Monte Carlo simulation, as well as mathematical manipulation in determining a demand profile for a new product. It is old and well known that simulations, such as Monte Carlo simulations, and statistics normalize and average historical data to generate values for uncertain future situations. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to average and normalize the data of Technology Strategy, Inc. in order to more accurately predict future situations by using old and well-known simulation and statistical techniques that cause the more accurate prediction of values.

7. As per claim 3, Technology Strategy, Inc. discloses a product demand forecasting system, wherein the module calculates the demand profiles of the similar products for their lengths of life and total life-cycle demands (See reference A, page 3, section 2, page 4, sections 1-3, and page 5, section 1, reference B, page 2, sections 1, 3, and 4, and page 3, section 1, and reference C, page 1, sections 1-3, page 2, sections 1, 3, and 4-8, and page 3, sections 1-3).

However, Technology Strategy, Inc. does not expressly disclose a demand normalization and average profile determination module that normalizes the demand profiles of the similar products for their lengths of life and total life-cycle demands.

Technology Strategy, Inc. teaches using simulation, such as the Monte Carlo simulation, as well as mathematical manipulation in determining a demand profile for a new product. It is old and well known that simulations, such as Monte Carlo simulations, and statistics normalize historical data to generate values for uncertain future situations. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to normalize the data of Technology Strategy, Inc. in order to more accurately predict future situations by using old and well-known simulation and statistical techniques that cause the more accurate prediction of values.

8. As per claim 4, Technology Strategy, Inc. teaches a product demand forecasting system wherein the module:

discretizing each profile at a pre-specified number of equidistant points between the beginning and end of the life-cycle (See reference A, page 4, section 3, reference B, page 1, section 1, page 2, section 4, page 3, section 1, and reference C, page 1, sections 1 and 3, page 2, sections 1, 3-5, and 8, and page 3, sections 3-5, wherein the profile has discrete information at a pre-defined number of points on the life-cycle graph. The points are tested for example weekly against the numbers of the prediction and these equidistant points reveal if the prediction and the real situation are matching up); and

performing simulations and mathematical manipulations on the historical data and demand profiles (See reference A, page 3, section 2, page 4, sections 1-3, and page 5, section 1, reference B, page 2, sections 1, 3, and 4, and page 3, section 1, and reference C, page 1, sections 1-3, page 2, sections 1, 3, and 4-8, and page 3, sections 1-3, wherein data mining, genetic

optimization, mathematical modeling, and Monte Carlo simulations are used to determine demand profiles).

However, Technology Strategy, Inc. does not expressly disclose a demand normalization and average profile determination module that includes calculating the empirical mean and the empirical standard deviation of all the profiles at these points to yield an averaged demand profile as the demand profile of the new product.

Technology Strategy, Inc. teaches using simulation, such as the Monte Carlo simulation, as well as statistical analysis to determine a demand profile for a product. It is old and well known that simulations, such as Monte Carlo simulations, and statistics normalize and analyze historical data to generate values for uncertain future situations. Empirical means and empirical standard deviations are also old and well-known in simulations and statistics. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to normalize and average the data of Technology Strategy, Inc. as well as determine the empirical mean and standard deviation in order to more accurately predict future situations by using old and well-known simulation and statistical techniques that cause the more accurate prediction of values.

9. As per claim 5, Technology Strategy, Inc. teaches a product demand forecasting system wherein the module performs simulations and mathematical manipulations on the historical data and demand profiles (See reference A, page 3, section 2, page 4, sections 1-3, and page 5, section 1, reference B, page 2, sections 1, 3, and 4, and page 3, section 1, and reference C, page 1, sections 1-3, page 2, sections 1, 3, and 4-8, and page 3, sections 1-3, wherein data mining,

genetic optimization, mathematical modeling, and Monte Carlo simulations are used to determine demand profiles).

However, Technology Strategy, Inc. does not expressly disclose a demand normalization and average profile determination module that estimates variance information of the normalized and averaged demand profiles.

Technology Strategy, Inc. teaches using simulation, such as the Monte Carlo simulation, as well as statistical analysis to determine a demand profile for a product. It is old and well known that simulations, such as Monte Carlo simulations, and statistics normalize and analyze historical data to generate values for uncertain future situations. Determining variance information is also old and well-known in simulations and statistics. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to normalize and average the data of Technology Strategy, Inc. as well as determine the variance in order to more accurately predict future situations by using old and well-known simulation and statistical techniques that cause the more accurate prediction of values.

10. As per claim 6, Technology Strategy, Inc. discloses a product demand forecasting system wherein the life-cycle demand predictor further comprises:

a relevant product selection module that selects the similar products and extracts the historical demand data of the similar products from an external historical demand database (See reference A, page 3, sections 1 and 2, page 4, sections 2 and 3, and page 5, section 1, reference B, page 2, sections 3 and 4, and page 3, section 1, and reference C, page 1, section 1, page 2, sections 1 and 5, and page 3, sections 2 and 3, wherein historical demand data is obtained for the company's external database for relevant products similar to the new product);

a future demand extrapolation module that extrapolates the total life-cycle demand of the new product (See reference A, page 3, section 2, and page 4, sections 2-3, reference B, page 2, sections 3 and 4, and page 3, section 1, and reference C, page 1, sections 1-3, page 2, sections 1 and 3-8, and page 3, sections 1-5, wherein future demand is estimated from values within a known range by assuming that the estimated values follows logically from the known values of demand).

11. As per claim 7, Technology Strategy, Inc. teaches a product demand forecasting system wherein the future demand extrapolation module extrapolates the total life-cycle demand of the new product by

calculating a run-rate of each of the similar products (See reference A, page 4, section 3, reference B, page 1, section 1, page 2, section 4, page 3, section 1, and reference C, page 1, sections 1 and 3, page 2, sections 1, 3-5, and 8, and page 3, sections 3-5, wherein the run-rate of each of the similar products is calculated);

associating each run-rate with a date that represents the points of that product's life-cycle (See reference A, page 4, section 3, reference B, page 1, section 1, page 2, section 4, page 3, section 1, and reference C, page 1, sections 1 and 3, page 2, sections 1, 3-5, and 8, and page 3, sections 3-5, wherein the run-rate is associated with dates in the season of the products life-cycle, this life cycle being plotted as a curve in a graph of points);

calculating an estimate of the run-rate at the date of the point of the life-cycle of the new product (See reference A, page 4, section 3, reference B, page 1, section 1, page 2, section 4, page 3, section 1, and reference C, page 1, sections 1 and 3, page 2, sections 1, 3-5, and 8, and

page 3, sections 3-5, wherein an estimate of the run-rate of the new product is estimated for a date at a point on the life-cycle curve).

However, while Technology Strategy, Inc. discloses plotting points on a life-cycle graph for the life cycle of a product during a season and determining the timing of when to perform markdowns using this plot, it does not specifically disclose that one of these points is a midpoint with a specific date.

Technology Strategy, Inc. is a tool used to predict the life-cycle demand of a product by looking at historical data of similar products. The tool plots forecasts of future demands and uses this plot (with points) to determine the timing of markdowns during the season of the product based on the product's run-rate. The tool assesses the product's performance on specific dates by comparing actual performance to predicted performance on the graph Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to determine a midpoint with an associated specific date for the product in order to more accurately reach the targeted goals of the season by establishing specific dates and performance which need to be met in order to reach the overall goal. See reference C, page 2 and page 3, section 4.

12. As per claim 8, Technology Strategy, Inc. discloses a product demand forecasting system further comprising an updating module that provides a revised new total life-cycle demand estimate using (1) the total life-cycle demand of the similar product, (2) the demand profile of the new product, and (3) past demand information, when available, of the new product (See reference A, page 3, section 2, and page 4, section 3, reference B, page 1, section 1, page 2, sections 3-4, page 3, section 1, and reference C, page 1, sections 1 and 3, page 2, sections 1, 3-5, and 8, page 3, sections 3-5, wherein updating occurs).

13. As per claim 9, Technology Strategy, Inc. teaches a product demand forecasting system wherein the forecast creator is also coupled to the updating module such that if the forecast creator receives the revised new total life-cycle demand estimate, the forecast creator uses the revised new total life-cycle demand estimate instead of the total life-cycle demand from the life-cycle demand predictor to calculate the life-cycle demand forecast (See reference A, page 3, section 2, and page 4, section 3, reference B, page 1, section 1, page 2, sections 3-4, page 3, section 1, and reference C, page 1, sections 1 and 3, page 2, sections 1, 3-5, and 8, page 3, sections 3-5).

14. As per claim 10, Technology Strategy, Inc. discloses a method for providing a life-cycle product demand forecast for a new product yet to be introduced, comprising:

collecting historical demand data of similar products of the new product, wherein the similar product have already been introduced (See reference A, page 3, sections 1 and 2, and page 4, sections 2 and 3, reference B, page 2, sections 3 and 4, and page 3, section 1, and reference C, page 1, section 1, page 2, sections 1 and 5, and page 3, sections 2 and 3, wherein historical demand data is found and stored for similar products already introduced to market);

generating demand profiles of the similar products based on the historical data of the similar products (See reference A, page 3, sections 1 and 2, and page 4, sections 2 and 3, reference B, page 2, sections 3 and 4, and page 3, section 1, and reference C, page 1, section 1, page 2, sections 1 and 5, and page 3, sections 2 and 3, wherein the demand profiles of the similar products are generated using the stored historical data);

running simulations and statistics on the demand profiles of the similar products to obtain a demand profile of the new product (See reference A, page 3, sections 1 and 2, and page 4,

sections 2 and 3, reference B, page 2, sections 3 and 4, and page 3, section 1, and reference C, page 1, section 1, page 2, sections 1 and 5, and page 3, sections 2 and 3, wherein simulations and statistics are applied to the demand profiles of the similar products);

generating a total life-cycle demand of the new product based on the historical demand data of the similar products (See reference A, page 3, section 2, page 4, sections 1-3, and page 5, section 1, reference B, page 2, sections 1, 3, and 4, and page 3, section 1, and reference C, page 1, sections 1-3, page 2, sections 1, 3, and 4-8, and page 3, sections 1-3, which discloses generating a total life-cycle demand for the new product based on historical demand of similar products);

generating the life-cycle product demand forecast for the new product based on the demand profile and total life-cycle demand of the new product (See reference A, page 3, section 2, and page 4, sections 2-3, reference B, page 2, sections 3 and 4, and page 3, section 1, and reference C, page 1, sections 1-3, page 2, sections 1 and 3-8, and page 3, sections 1-5, which discloses generating a life-cycle product demand forecast for the new product based on the demand profile and the total life-cycle demand determined. The life span of the product is assessed in the context of product and pricing strategies associated with the product. These strategies are updated during this life span).

However, while Technology Strategy, Inc. uses simulation, such as Monte Carlo simulations, and statistics to determine the demand profile, Technology Strategy, Inc. does not expressly disclose normalizing and averaging the demand profiles.

Technology Strategy, Inc. teaches using simulation, such as the Monte Carlo simulation, as well as mathematical manipulation in determining a demand profile for a new product. It is

old and well known that simulations, such as Monte Carlo simulations, normalize and average historical data to generate values for uncertain future situations. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to average and normalize the data of Technology Strategy, Inc. in order to more accurately predict future situations by using old and well-known simulation and statistical techniques that cause the more accurate prediction of values.

15. As per claims 11, 12, 13, and 14, claims 11, 12, 13, and 14 are method versions of the system of claims 3, 4, 5, and 6, respectively. Therefore, claims 11, 12, 13, and 14 are rejected using the same art and rationale relied upon in the rejection of claims 3, 4, 5, and 6, respectively.

16. As per claim 15, Technology Strategy, Inc. teaches a method further comprising:

determining if past demand information of the new product is available (See reference A, page 3, section 2, and page 4, section 3, reference B, page 1, section 1, page 2, sections 3-4, page 3, section 1, and reference C, page 1, sections 1 and 3, page 2, sections 1, 3-5, and 8, page 3, sections 3-5, wherein the availability of past data is considered);

if the past demand information of the new product is available, then providing a revised new total life-cycle demand estimate using (1) the total life-cycle demand of the similar product, (2) the demand profile of the new product, and (3) past demand information, when available, of the new product (See reference A, page 3, section 2, and page 4, section 3, reference B, page 1, section 1, page 2, sections 3-4, page 3, section 1, and reference C, page 1, sections 1 and 3, page 2, sections 1, 3-5, and 8, page 3, sections 3-5, wherein updating occurs when the past demand information is available).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Brinkley et al. (U.S. 5,963,919) teaches forecasting inventory.

Usrey (U.S. 6,366,890) teaches using past sales data to make future predictions about inventory needs.

Willemain et al. (U.S. 6,205,431) discloses using historical demand data to plan production of products.

Safai et al. ("Implementing setup optimization on the shop floor") discloses a model of Hewlitt Packard's for optimizing production.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Beth Van Doren whose telephone number is (703) 305-3882. The examiner can normally be reached on M-F, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (703) 305-9643. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703) 305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

bvd
June 9, 2003

TARIQ R. HAFIZ
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